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5000V Digital/Analog Megohmmeter
Models 5050 & 5060

CE

The Model 5050 and 5060 are the latest design in 5000V Megohmmeters, the most innovative products in their class on the market today. The features and functions incorporated in this product family are the results of many years of analyzing how megohmmeters are used in real applications while applying the most advanced technology available to automate and facilitate the testing process for these applications.

Many features incorporated in the Models 5050 and 5060 (not found in any other megohmmeter on the market today) include automatic calculation and presentation of the Dielectric Absorption Ratio (DAR) Polarization Index (PI) and Dielectric Discharge (DD). The PI ratio timers are also user defined. These new advanced megohmmeters display the test voltage, insulation resistance and the leakage current during the test. Capacitance of the sample and discharge voltage present at the test leads is displayed at the conclusion of the test.

The Models 5050 and 5060 are designed with the highest level of safety features built in. Both units are packaged in a rugged double insulated case. They incorporate test inhibit capabilities which will not allow test voltages to be generated if a live sample is detected with voltage of 25V . The test terminals are recessed to ensure operating safety and the test leads, rated for 5000V, are the only truly safety approved 5000V leads on the market today. Both models can be operated from an internal rechargeable battery system or from AC line power.

The Model 5060 offers additional functionality in that an RS-232 port provides the ability to configure the unit from a PC and run the test from the PC. Automatic documentation of the test and test results eliminates the need for writing down information. Test reports can be generated directly from the instrument to a printer or through the PC using the DataView® graphing and analysis software provided.

The list of features, functions and benefits goes on and on. If you are looking for a truly advanced 5000V megohmmeter, the AEMC Models 5050 and 5060 are the best in class and available at an affordable price.

Features

- True Megohmmeter®
- Test voltage combinations of 500V, 1000V, 2500V and 5000V
- Insulation measurements from 1kΩ to 10,000GΩ (10TΩ)
- Adjustable and programmable test voltage (50 to 5000V)
- Automatic calculation of DAR, PI and DD values
- Direct measurement and display of Capacitance and Leakage Current
- Display resistance, test voltage and run time
- Programmable test run times and PI ratio times
- Smooth and Alarm functions
- Automatic test inhibition if live sample (>25V)
- Automatic discharge and display of discharge voltage
- Large dual-display with time, voltage and measurements shown
- Bright blue electroluminescent backlight
- Programmable test voltage lock-out
- Programmable alarm setting
- Auto power-down when not in use
- AC or DC powered with rechargeable NiMH batteries
- Rugged dual wall weatherproof field case
- Designed and built to IEC safety standards
- EN 61010-1, 600V, Cat. III

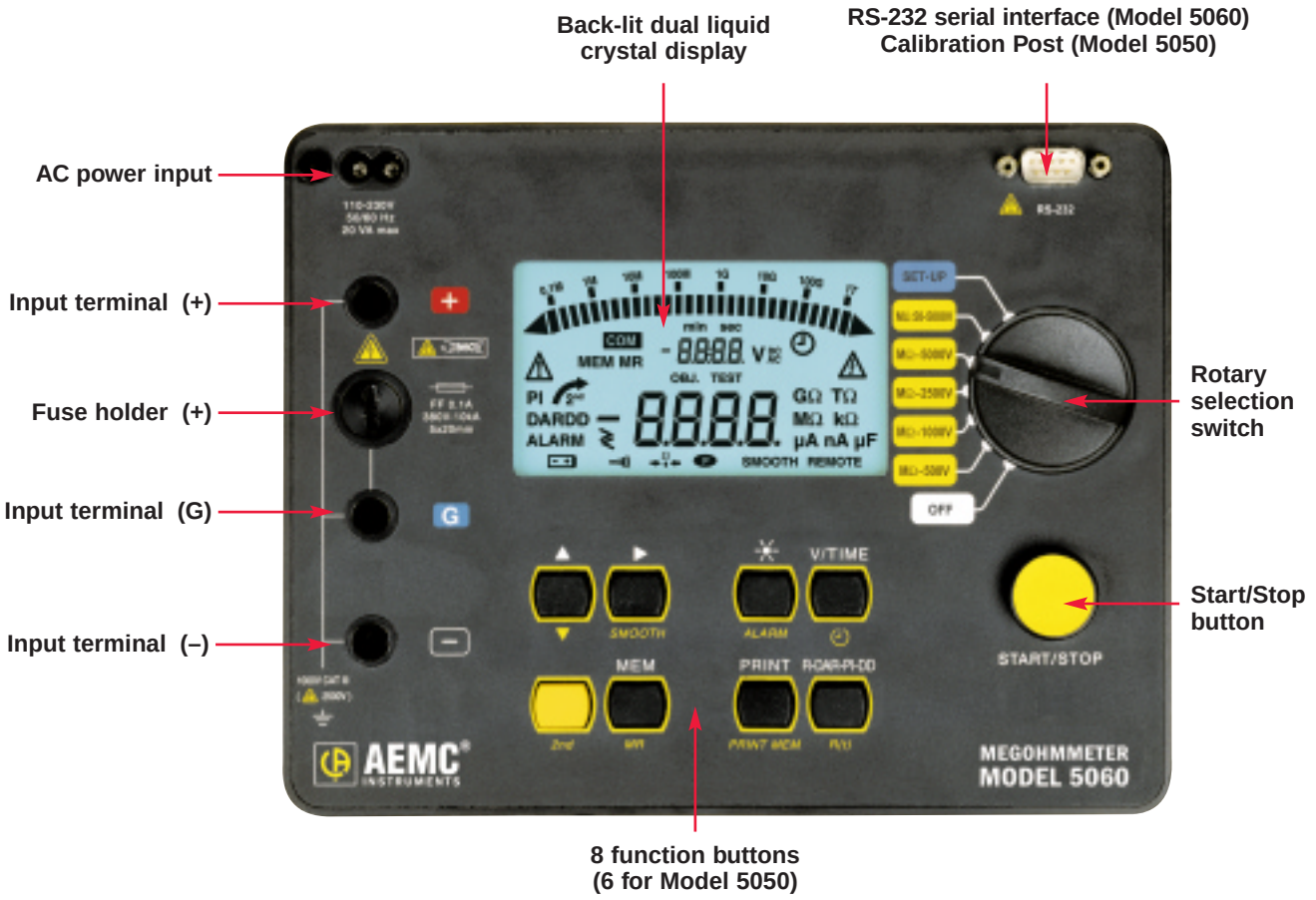
Model 5060 includes these additional features:

- RS-232 interface for direct printing of results (serial output)
- 128kB memory for storing extensive field test data
- Remote operation of Megohmmeter from PC
- Includes DataView® software to configure instrument, run tests and generate reports

Applications

- Test insulation on cables, transformers, motors, generators, insulators and wiring installations
- High resistance or absorption tests
- Spot reading tests
- Timed resistance measurements
- Dielectric Absorbsion (DAR) and Polarization Index (PI) tests
- Multi-layer insulation testing
- Low insulation test range for testing old or flooded installations
- Motor insulation resistance measurements
- Computer controlled production line testing
- Predictive maintenance by storing results in PC for trend analysis
- User selectable voltage testing to provide application specific testing
- Dielectric discharge testing to detect bad layers in multi-layer insulation testing

Key Components



Specifications

MODELS		5050	5060
ELECTRICAL			
INSULATION TESTS			
Test Voltage/Range	500V 1000V 2500V 5000V	20kΩ to 2000GΩ 40kΩ to 4000GΩ 100kΩ to 10,000GΩ (10TΩ) 200kΩ to 10,000GΩ (10TΩ)	20kΩ to 2000GΩ 40kΩ to 4000GΩ 100kΩ to 10,000GΩ (10TΩ) 200kΩ to 10,000GΩ (10TΩ)
Automatic Voltage		Programmable: 50 to 1000V: 10V increments 1000 to 5000V: 100V increments	Programmable: 50 to 1000V: 10V increments 1000 to 5000V: 100V increments
Short Circuit Current		<3mADC	<3mADC
Accuracy	1kΩ to 40GΩ 40GΩ to 10TΩ	±5% of Reading + 3cts ±15% of Reading + 10cts	±5% of Reading + 3cts ±15% of Reading + 10cts
DAR (1 min/30 sec)		0.000 to 9.999	0.000 to 9.999
PI (10 min/1 min & user programmable)		0.000 to 9.999	0.000 to 9.999
DD (Current after 1 min ÷ (test voltage x capacitance)		0.01 to 9.999	0.01 to 9.999
Capacitance Check		0.005 to 4.999µF	0.005 to 4.999µF
Leakage Current Measurement		0.250nA to 3mA	0.250nA to 3mA
Programmable Run Time R(t)		1 to 60 minutes	1 to 60 minutes
Selectable Smooth Function		Digital filtering stabilized display readings	Digital filtering stabilized display readings
Discharge After Test		Automatic	Automatic
Discharge Voltage Display		Yes	Yes
Voltage Test/Safety Check		0 to 1000VAC/DC (16 to 420Hz), 1V Resolution	0 to 1000VAC/DC (16 to 420Hz), 1V Resolution
Voltage Warning Indicator		Yes >25V	Yes >25V
Test Inhibition		Yes >25V	Yes >25V
Guard Terminal		Yes	Yes
DISPLAY			
Backlight		Blue, Electroluminescent	
Display Size		4 x 2 1/4" (102 x 57mm)	
Digital Display		Two 4000-count displays	
Analog Bargraph		33-segments	
GENERAL			
Power Source		8 x NiMN rechargeable batteries AC: 85 to 256VAC (50/60Hz)	
Dimensions		10.63 x 9.84 x 7.09" (270 x 250 x 180mm)	
Weight		7.7 lbs (3.5kg)	
Protection Index		IP54 (NEMA 4X)	
OTHER SPECIFICATIONS			
Report Print Out on Printer		No	Preset format
Storage of Readings over Time R(t)		4kB memory	128kB memory
Programmable Reading Intervals		10 sec to 10 min	10 sec to 10 min
Test Voltage Display		Yes	Yes
Elapsed Test Time Display		Yes	Yes
Real Time/Date Display		No	Yes
Test Voltage Lock-out		User programmed	User programmed
Storage of Test Results		20 Readings	128kB memory with RS-232
Bi-directional Software		No	Yes (included)
PC Operation of Megohmmeter		No	Yes
SAFETY			
Safety Rating		EN 61010-1, 600V, Cat. III	
CE Mark		Yes	

Accessories

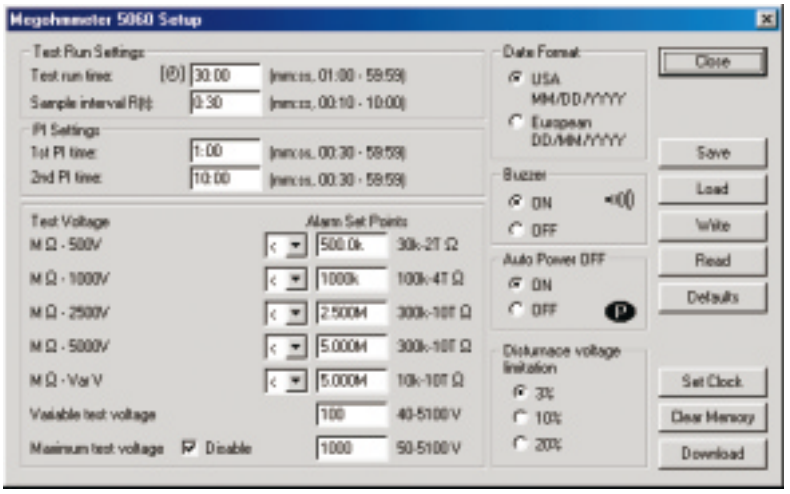
Both models include soft accessory bag with one red, one blue and one black lead with integral hippo clips (truly rated at 5kV), one jumper lead for use with guard terminal, rechargeable battery, US 120V power cord, spare fuses and user manual.

Model 5060 also includes one 6 ft RS-232 DB9/DB25 F/F to DB9/DB25 F/F Cable and DataView®Lite software

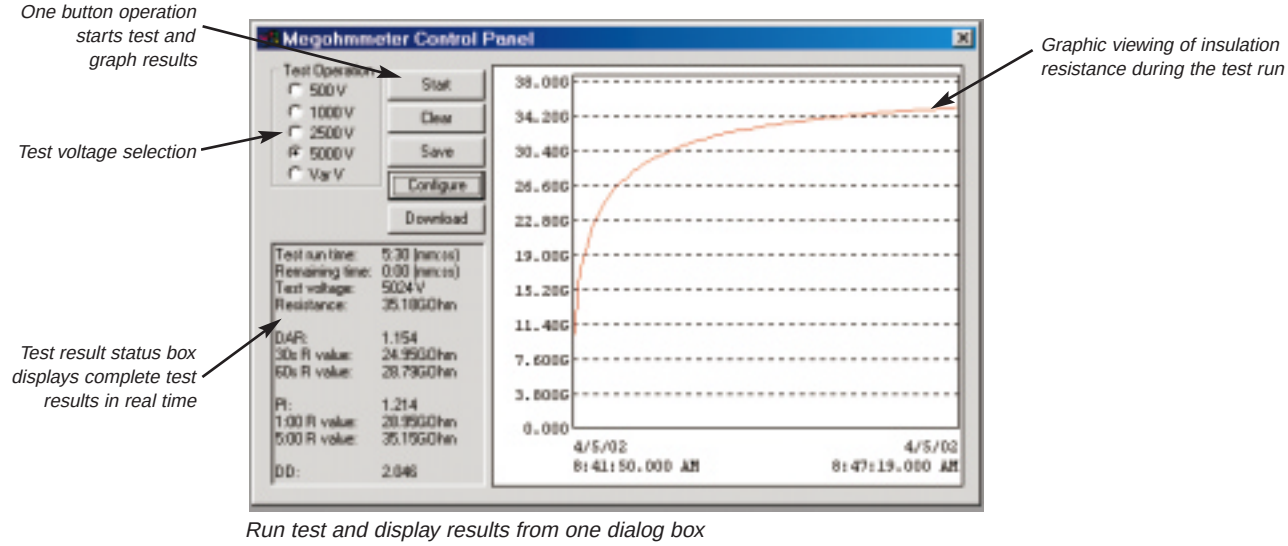
ORDERING INFORMATION	CATALOG NO.
Megohmmeter Model 5050 (Digital, with Analog Bargraph, Backlight, Alarm, Timer, 500V, 1000V, 2500V, 5000V, Auto DAR/PI/DD)	**Cat. #2130.20**
Includes soft accessory bag, one red, one blue and one black shielded lead with integral hippo clips (rated at 5kV), one jumper lead for use with guard terminal, rechargeable battery pack, US120V power cord, spare fuses and user manual	
Megohmmeter Model 5060 (Digital, with Analog Bargraph, Backlight, Alarm, Timer, 500V, 1000V, 2500V, 5000V, Auto DAR/PI/DD, RS-232 w/DataView®Lite Software)	**Cat. #2130.21**
Includes soft accessory bag, one red, one blue and one black shielded lead with integral hippo clips (rated at 5kV), one jumper lead for use with guard terminal, one 6 ft RS-232 DB9/DB25 F/F to DB9/DB25 F/F Cable, rechargeable battery pack, DataView®Lite software, US 120V power cord, spare fuses and user manual	
Accessories (Optional)	
Converter, Serial-to-Parallel (RS-232/Centronics)	Cat. #2119.62

DataView®Lite Software for Model 5060

Model 5060 easily configures and runs right from a PC.



Clear and easy setup of all functions from one dialog box



Run test and display results from one dialog box

Features

Configure all functions of the Megohmmeter Model 5060

Print reports of all test results

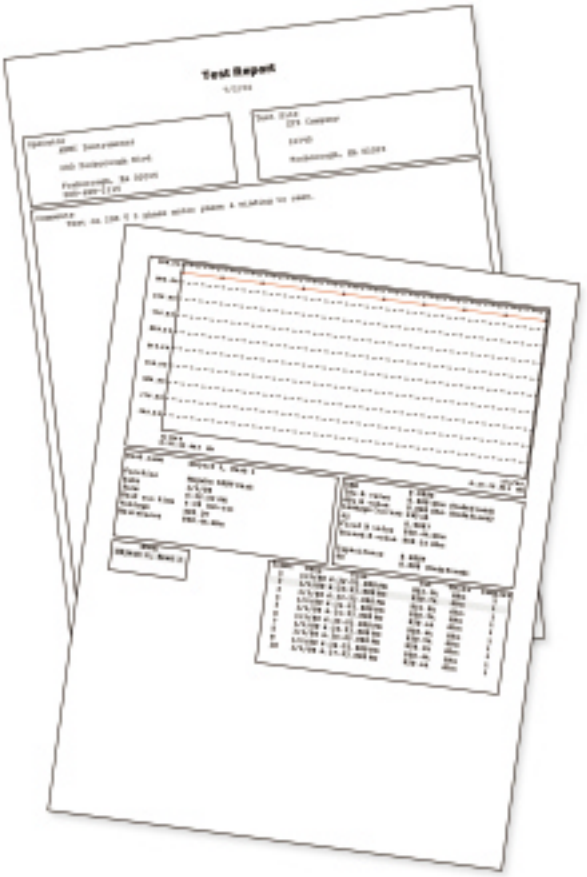
- Select test voltage and run tests from your computer with a simple click and execute process
- Capture and display data in real time
- Retrieve data from the instrument's memory
- Display DAR, PI and DD ratios
- Plot graphs of manual and timed tests
- Include your analysis in the comments section with the report
- Store a library of setups for different applications

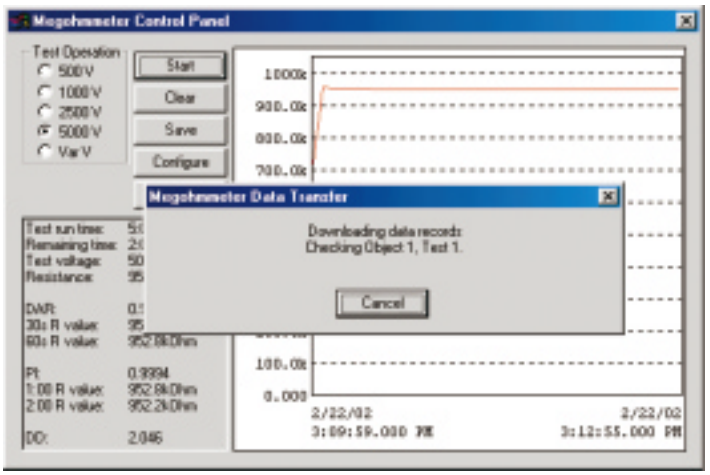
Minimum System Requirements

- Windows®95/98/2000/ME or Windows®NT 4.0
- 16MB of RAM (32MB recommended)
- 35MB of hard disk space (100MB recommended)
- CD Rom drive

Automatic Report Generation

Reports may be displayed on your PC and printed. Each report includes all test results in a tabular and graphic format, as well as operator and test site information. Comments typed in at time of storage will also be included.

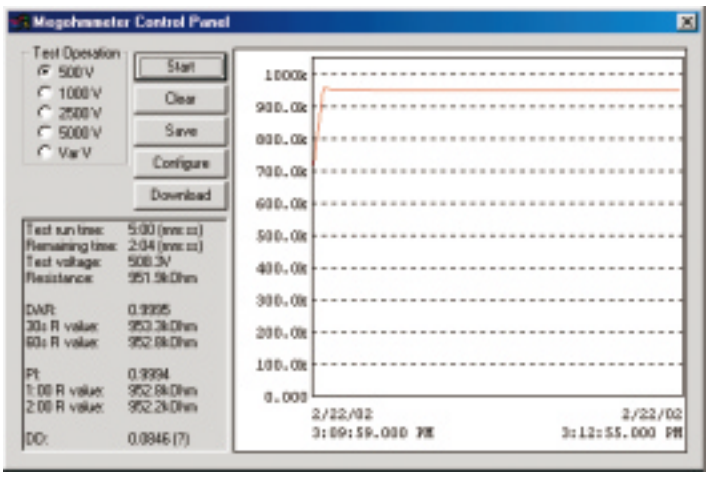




A simple press of the download button from either the setup or run dialog boxes will show all test results stored in the Model 5060.

The DataView®Lite Software provides a convenient way to configure and control Megohmmeter tests from your computer. Through the use of two clear and easy-to-use dialog boxes, all functions of the Model 5060 can be configured and tests can be initiated. Results can be displayed in real time and stored in your PC. Reports may be printed along with the operator's comments and analysis.

DataView®Lite is included with the Model 5060



Each test will be stored as its own file and may be given its own unique file name.

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